

THE ASTROPHYSICAL JOURNAL
CONTENTS OF VOLUME 542, PART 1

2000 OCTOBER 10, NUMBER 1

	Page
GRAVITATIONAL CLUSTERING FROM χ^2 INITIAL CONDITIONS <i>Román Scoccimarro</i>	1
CLUSTER CORRELATION IN MIXED MODELS <i>A. Gardini, S. A. Bonometto, G. Murante, & G. Yepes</i>	9
MEASUREMENT OF [O III] EMISSION IN LYMAN-BREAK GALAXIES <i>Harry Teplitz, Matthew A. Malkan, Charles C. Steidel, Ian S. McLean, E. E. Becklin, Donald F. Figer, Andrea M. Gilbert, James R. Graham, James E. Larkin, N. A. Levenson, & Mavourneen K. Wilcox</i>	18
AN EXCESS OF SUBMILLIMETER SOURCES NEAR 4C 41.17: A CANDIDATE PROTOCLUSTER AT $z = 3.8$? <i>R. J. Ivison, J. S. Dunlop, Ian Smail, Arjun Dey, Michael C. Liu, & J. R. Graham</i>	27
IS MS 1054-03 AN EXCEPTIONAL CLUSTER? A NEW INVESTIGATION OF ROSAT HRI X-RAY DATA <i>D. M. Neumann & M. Arnaud</i>	35
O VI AND MULTICOMPONENT H I ABSORPTION ASSOCIATED WITH A GALAXY GROUP IN THE DIRECTION OF PG 0953+415: PHYSICAL CONDITIONS AND BARYONIC CONTENT <i>Todd M. Tripp & Blair D. Savage</i>	42
GALAXY CLUSTERING EVOLUTION IN THE CNOC2 HIGH-LUMINOSITY SAMPLE <i>R. G. Carlberg, H. K. C. Yee, S. L. Morris, H. Lin, P. B. Hall, D. Patton, M. Sawicki, & C. W. Shepherd</i>	57
SYNCHROTRON EMISSION FROM HOT ACCRETION FLOWS AND THE COSMIC MICROWAVE BACKGROUND ANISOTROPY <i>Rosalba Perna & Tiziana Di Matteo</i>	68
THE HOST GALAXY OF THE LENSED QUASAR Q0957+561 <i>C. R. Keeton, E. E. Falco, C. D. Impey, C. S. Kochanek, J. Lehar, B. A. McLeod, H.-W. Rix, J. A. Muñoz, & C. Y. Peng</i>	74
TIME DEPENDENCE OF THE MASS ACCRETION RATE IN CLUSTER COOLING FLOWS <i>Eric A. Lufkin, Craig L. Sarazin, & Raymond E. White III</i>	94
DETECTION OF THE ENTROPY OF THE INTERGALACTIC MEDIUM: ACCRETION SHOCKS IN CLUSTERS, ADIABATIC CORES IN GROUPS <i>Paolo Tozzi, Caleb Scharf, & Colin Norman</i>	106
HIGH-RESOLUTION IMAGING OF MOLECULAR GAS AND DUST IN THE ANTENNAE (NGC 4038/39): SUPER GIANT MOLECULAR COMPLEXES <i>Christine D. Wilson, Nicholas Scoville, Suzanne C. Madden, & Vassilis Charmandaris</i>	120
HUBBLE SPACE TELESCOPE PHOTOMETRY OF THE DWARF SPHEROIDAL GALAXY ESO 410-G005 <i>Igor D. Karachentsev, Margarita E. Sharina, Eva K. Grebel, Andrew E. Dolphin, Doug Geisler, Puragra Guhathakurta, Paul W. Hodge, Valentina E. Karachentseva, Ata Sarajedini, & Patrick Seitzer</i>	128
IDENTIFYING OLD TIDAL DWARF IRREGULARS <i>Deidre A. Hunter, Sally D. Hunsberger, & Erin W. Roye</i>	137
STELLAR ORBITS IN TRIAXIAL CLUSTERS AROUND BLACK HOLES IN GALACTIC NUCLEI <i>Niranjana Sambhus & S. Sridhar</i>	143
X-RAY AND OPTICAL VARIABILITY IN NGC 4051 AND THE NATURE OF NARROW-LINE SEYFERT 1 GALAXIES <i>B. M. Peterson, I. M. McHardy, B. J. Wilkes, P. Berlind, R. Bertram, M. Calkins, S. J. Collier, J. P. Huchra, S. Mathur, I. Papadakis, J. Peters, R. W. Pogge, P. Romano, S. Tokarz, P. Uttley, M. Vestergaard, & R. M. Wagner</i>	161
X-RAY EMISSION FROM SEYFERT 2 GALAXIES WITH OPTICAL POLARIZED BROAD LINES <i>Hisamitsu Awaki, Shiro Ueno, Yoshiaki Taniguchi, & Kimberly A. Weaver</i>	175
RADIO SOURCES IN LOW-LUMINOSITY ACTIVE GALACTIC NUCLEI I. VLA DETECTIONS OF COMPACT, FLAT-SPECTRUM CORES <i>Neil M. Nagar, Heino Falcke, Andrew S. Wilson, & Luis C. Ho</i>	186
RADIO SOURCES IN LOW-LUMINOSITY ACTIVE GALACTIC NUCLEI II. VERY LONG BASELINE INTERFEROMETRY DETECTIONS OF COMPACT RADIO CORES AND JETS IN A SAMPLE OF LINERS <i>Heino Falcke, Neil M. Nagar, Andrew S. Wilson, & James S. Ulvestad</i>	197

	Page
FORMATION AND EVOLUTION OF DUSTY STARBURST GALAXIES. I. A NEW METHOD FOR DERIVING A SPECTRAL ENERGY DISTRIBUTION <i>Kenji Bekki & Yasuhiro Shioya</i>	201
SELF-CONSISTENT RESPONSE OF A GALACTIC DISK TO AN ELLIPTICAL PERTURBATION HALO POTENTIAL <i>Chanda J. Jog</i>	216
A THEORETICAL RECALIBRATION OF THE EXTRAGALACTIC H II REGION SEQUENCE <i>M. A. Dopita, L. J. Kewley, C. A. Heisler, & R. S. Sutherland</i>	224
PARTICLE ACCELERATION AT ULTRARELATIVISTIC SHOCKS: AN EIGENFUNCTION METHOD <i>J. G. Kirk, A. W. Guthmann, Y. A. Gallant, & A. Achterberg</i>	235
A CENTRAL ENGINE FOR COSMIC GAMMA-RAY BURST SOURCES <i>M. A. Ruderman, L. Tao, & W. Kluźniak</i>	243
RAPID OPTICAL FOLLOW-UP OBSERVATIONS OF SGR EVENTS WITH ROTSE-I <i>C. Akerlof, R. Balsano, S. Barthelmy, J. Bloch, P. Butterworth, D. Casperson, T. Cline, S. Fletcher, G. Gisler, J. Hills, R. Kehoe, B. Lee, S. Marshall, T. McKay, A. Pawl, W. Priedhorsky, N. Seldomridge, J. Szymanski, & J. Wren</i>	251
THE MACHO PROJECT LARGE MAGELLANIC CLOUD VARIABLE-STAR INVENTORY. IX. FREQUENCY ANALYSIS OF THE FIRST-OVERTONE RR LYRAE STARS AND THE INDICATION FOR NONRADIAL PULSATIONS <i>C. Alcock, R. Allsman, D. R. Alves, T. Axelrod, A. Becker, D. Bennett, C. Clement, K. H. Cook, A. Drake, K. Freeman, M. Geha, K. Griest, G. Kovács, D. W. Kurtz, M. Lehner, S. Marshall, D. Minniti, C. Nelson, B. Peterson, P. Popowski, M. Pratt, P. Quinn, A. Rodgers, J. Rowe, C. Stubbs, W. Sutherland, A. Tomaney, T. Vandehei, & D. L. Welch</i>	257
THE MACHO PROJECT: MICROLENSING RESULTS FROM 5.7 YEARS OF LARGE MAGELLANIC CLOUD OBSERVATIONS <i>C. Alcock, R. A. Allsman, D. R. Alves, T. S. Axelrod, A. C. Becker, D. P. Bennett, K. H. Cook, N. Dalal, A. J. Drake, K. C. Freeman, M. Geha, K. Griest, M. J. Lehner, S. L. Marshall, D. Minniti, C. A. Nelson, B. A. Peterson, P. Popowski, M. R. Pratt, P. J. Quinn, C. W. Stubbs, W. Sutherland, A. B. Tomaney, T. Vandehei, & D. Welch (The MACHO Collaboration)</i>	281
SYNTHETIC POST-ASYMPTOTIC GIANT BRANCH EVOLUTION: BASIC MODELS AND APPLICATIONS TO DISK POPULATIONS <i>Letizia Stanghellini & Alvio Renzini</i>	308
RECONSTRUCTION OF STELLAR ORBITS CLOSE TO SAGITTARIUS A*: POSSIBILITIES FOR TESTING GENERAL RELATIVITY <i>P. Chris Fragile & Grant J. Mathews</i>	328
THE SEARCH FOR INTERSTELLAR C ₆₀ <i>G. H. Herbig</i>	334
INTERFEROMETRIC OBSERVATION OF THE L483 MOLECULAR CORE <i>Y.-S. Park, J.-F. Panis, N. Ohashi, M. Choi, & Y. C. Minh</i>	344
HIGHLY POLARIZED THERMAL DUST EMISSION IN THE BOK GLOBULE CB 068 <i>Jacques P. Vallée, Pierre Bastien, & Jane S. Greaves</i>	352
HIGH-RESOLUTION IMAGING OF PHOTODISSOCIATION REGIONS IN NGC 6334 <i>M. G. Burton, M. C. B. Ashley, R. D. Marks, A. E. Schinckel, J. W. V. Storey, A. Fowler, M. Merrill, N. Sharp, I. Gatley, D. A. Harper, R. F. Loewenstein, F. Mrozek, J. M. Jackson, & K. E. Kraemer</i>	359
A COMPARISON OF THE SPATIAL DISTRIBUTION OF H ¹³ CO ⁺ , CH ₃ OH, AND C ³⁴ S EMISSION AND ITS IMPLICATION IN HEILES CLOUD 2 <i>Shigehisa Takakuwa, Hitomi Mikami, Masao Saito, & Naomi Hirano</i>	367
G328.4+0.2: A LARGE AND LUMINOUS CRAB-LIKE SUPERNOVA REMNANT <i>B. M. Gaensler, J. R. Dickel, & A. J. Green</i>	380
DISCOVERY OF X-RAY EMISSION FROM G328.4+0.2, A CRAB-LIKE SUPERNOVA REMNANT <i>John P. Hughes, Patrick O. Slane, & Paul P. Plucinsky</i>	386
UNVEILING DEEPLY EMBEDDED SOURCES BY NEAR-INFRARED POLARIMETRIC IMAGING <i>Yongqiang Yao, Miki Ishii, Tetsuya Nagata, Hidehiko Nakaya, & Shuji Sato</i>	392
LIFETIME MEASUREMENTS IN Sn II <i>R. M. Scheckman, S. Cheng, L. J. Curtis, S. R. Federman, M. C. Fritts, & R. E. Irving</i>	400
GAS-PHASE INFRARED PHOTODISSOCIATION SPECTROSCOPY OF CATIONIC POLYAROMATIC HYDROCARBONS <i>Jos Oomens, André J. A. van Roij, Gerard Meijer, & Gert von Helden</i>	404
THE Mg II AND Ly α LINES OF NEARBY K DWARFS: INTERSTELLAR MEDIUM COMPONENTS AND FLUX MEASUREMENTS <i>Brian E. Wood, Carol W. Ambruster, Alexander Brown, & Jeffrey L. Linsky</i>	411

CONTENTS

v

AN INTERESTING EPISODE OF ACCRETION ACTIVITY IN UX ORIONIS <i>A. Natta, V. P. Grinin, & L. V. Tamboltseva</i>	Page 421
HUBBLE SPACE TELESCOPE OBSERVATIONS OF THE LUMINOUS BLUE VARIABLE/W-R ECLIPSING BINARY SYSTEM HD 5980 <i>Gloria Koenigsberger, Leonid Georgiev, Rodolfo Barbá, Zlatan Tsvetanov, Nolan R. Walborn, Virpi S. Niemela, Nidia Morrell, & Regina Schulte-Ladbeck</i>	428
EUVE OBSERVATIONS OF HERCULES X-1 DURING A SHORT HIGH STATE TURN-ON <i>D. A. Leahy, H. Marshall, & D. Matthew Scott</i>	446
THE BAR-MODE INSTABILITY IN DIFFERENTIALLY ROTATING NEUTRON STARS: SIMULATIONS IN FULL GENERAL RELATIVITY <i>Masaru Shibata, Thomas W. Baumgarte, & Stuart L. Shapiro</i>	453
EVOLUTIONARY MODELS FOR VERY LOW-MASS STARS AND BROWN DWARFS WITH DUSTY ATMOSPHERES <i>G. Chabrier, I. Baraffe, F. Allard, & P. Hauschildt</i>	464
TEMPERATURE PROFILES OF ACCRETION DISKS AROUND RAPIDLY ROTATING NEUTRON STARS IN GENERAL RELATIVITY AND THE IMPLICATIONS FOR CYGNUS X-2 <i>Sudip Bhattacharyya, Arun V. Thampan, Ranjeev Misra, & Bhaskar Datta</i>	473
PLASMA MODES ALONG THE OPEN FIELD LINES OF A NEUTRON STAR <i>U. A. Mofiz & B. J. Ahmedov</i>	484
HYDROGEN Ly α ABSORPTION PREDICTIONS BY BOLTZMANN MODELS OF THE HELIOSPHERE <i>Brian E. Wood, Hans-Reinhard Müller, & Gary P. Zank</i>	493
TWISTED CORONAL MAGNETIC LOOPS <i>J. A. Klimchuk, S. K. Antiochos, & D. Norton</i>	504
H α POLARIZATION DURING A WELL-OBSERVED SOLAR FLARE: PROTON ENERGETICS AND IMPLICATIONS FOR PARTICLE ACCELERATION PROCESSES <i>A. Gordon Emslie, James A. Miller, Etienne Vogt, Jean-Claude Hénoux, & Sylvie Sahal-Bréchet</i>	513
SOLAR CYCLE-INDUCED VARIATIONS IN GONG <i>p</i> -MODE FREQUENCIES AND SPLITTINGS <i>Kiran Jain, S. C. Tripathy, & A. Bhatnagar</i>	521
A CLASSICAL THEORY OF CORONAL EMISSION LINE POLARIZATION <i>Haosheng Lin & Roberto Casini</i>	528
2000 OCTOBER 20, NUMBER 2	
EFFECT OF REIONIZATION ON STRUCTURE FORMATION IN THE UNIVERSE <i>Nikolay Y. Gnedin</i>	535
ULTRA-HIGH-ENERGY COSMIC RAYS MAY COME FROM CLUSTERED SOURCES <i>John N. Bahcall & Eli Waxman</i>	543
FEEDBACK FROM GALAXY FORMATION: ESCAPING IONIZING RADIATION FROM GALAXIES AT HIGH REDSHIFT <i>Massimo Ricotti & J. Michael Shull</i>	548
NONLINEAR STOCHASTIC BIASING FROM THE FORMATION EPOCH DISTRIBUTION OF DARK HALOS <i>Atsushi Taruya & Yasushi Suto</i>	559
ON THE RADIAL DENSITY PROFILE OF INTRACLUSTER GAS TRACING THE ISOTHERMAL DARK HALO WITH A FINITE CORE <i>Xiang-Ping Wu and Yan-Jie Xue</i>	578
ON THE RELATION BETWEEN PEAK LUMINOSITY AND PARENT POPULATION OF TYPE Ia SUPERNOVAE: A NEW TOOL FOR PROBING THE AGES OF DISTANT GALAXIES <i>Valentin D. Ivanov, Mario Hamuy, & Philip A. Pinto</i>	588
ON COOLING FLOWS AND THE SUNYAEV-ZELDOVICH EFFECT <i>Subhabrata Majumdar & Biman B. Nath</i>	597
PROPERTIES OF COSMIC SHOCK WAVES IN LARGE-SCALE STRUCTURE FORMATION <i>Francesco Miniati, Dongsu Ryu, Hyesung Kang, T. W. Jones, Renyue Cen, & Jeremiah P. Ostriker</i>	608
SUBSTRUCTURE AND HALO DENSITY PROFILES IN A WARM DARK MATTER COSMOLOGY <i>Pedro Colin, Vladimir Avila-Reese, & Octavio Valenzuela</i>	622
[O II] EMISSION, EIGENVECTOR 1, AND ORIENTATION IN RADIO-QUIET QUASARS <i>J. Kuraszkiewicz, B. J. Wilkes, W. N. Brandt, & M. Vestergaard</i>	631

	Page
OBSERVATIONAL CONSTRAINTS ON THE INTERNAL VELOCITY FIELD OF QUASAR EMISSION-LINE CLOUDS <i>Mark Bottorff, Gary Ferland, Jack Baldwin, & Kirk Korista</i>	644
THE CHANDRA X-RAY OBSERVATORY RESOLVES THE X-RAY MORPHOLOGY AND SPECTRA OF A JET IN PKS 0637-752 <i>G. Chartas, D. M. Worrall, M. Birkinshaw, M. Cresitello-Dittmar, W. Cui, K. K. Ghosh, D. E. Harris, E. J. Hooper, D. L. Jauncey, D.-W. Kim, J. Lovell, S. Mathur, D. A. Schwartz, S. J. Tingay, S. N. Virani, & B. J. Wilkes</i>	655
FACE-ON DUST DISKS IN GALAXIES WITH OPTICAL JETS <i>William B. Sparks, Stefi A. Baum, John Biretta, F. Duccio Macchetto, & André R. Martel</i>	667
THE EVOLUTION OF THE GALACTIC MORPHOLOGICAL TYPES IN CLUSTERS <i>Giovanni Fasano, Bianca M. Poggianti, Warrick J. Couch, Daniela Bettoni, Per Kjærgaard, & Mariano Moles</i>	673
THE PHYSICAL CONDITIONS OF THE X-RAY EMISSION LINE REGIONS IN THE CIRCINUS GALAXY <i>Masao Sako, Steven M. Kahn, Frits Paerels, & Duane A. Liedahl</i>	684
WHAT DO THE ULTRAVIOLET SPECTRA OF NARROW-LINE SEYFERT 1 GALAXIES TELL US ABOUT THEIR BROAD-LINE REGIONS? <i>Joanna Kuraszewicz, Belinda J. Wilkes, Bożena Czerny, & Smita Mathur</i>	692
OBSERVATIONS OF SEYFERT GALAXIES BY OSSE AND PARAMETERS OF THEIR X-RAY/GAMMA-RAY SOURCES <i>Andrzej A. Zdziarski, Juri Poutanen, & W. Neil Johnson</i>	703
THE INFRARED SIDE OF GALAXY FORMATION. I. THE LOCAL UNIVERSE IN THE SEMIANALYTICAL FRAMEWORK <i>G. L. Granato, C. G. Lacey, L. Silva, A. Bressan, C. M. Baugh, S. Cole, & C. S. Frenk</i>	710
THE HUBBLE SPACE TELESCOPE SURVEY OF BL LACERTAE OBJECTS. III. MORPHOLOGICAL PROPERTIES OF LOW-REDSHIFT HOST GALAXIES <i>Renato Falomo, Riccardo Scarpa, Aldo Treves, & C. Megan Urry</i>	731
MULTIWAVELENGTH EXAMINATION OF THE COS B FIELD 2CG 075+00 YIELDS A BLAZAR IDENTIFICATION FOR 3EG J2016+3657 <i>R. Mukherjee, E. V. Gotthelf, J. Halpern, & M. Tavani</i>	740
THE EFFECT OF EXPANSION ON MASS ENTRAINMENT AND STABILITY OF SUPER-ALFVÉNIC JETS <i>Alexander Rosen & Philip E. Hardee</i>	750
SEEING GALAXIES THROUGH THICK AND THIN. I. OPTICAL OPACITY MEASURES IN OVERLAPPING GALAXIES <i>Raymond E. White III, William C. Keel, & Christopher J. Conselice</i>	761
AN ULTRAVIOLET Fe II IMAGE OF SN 1885 IN M31 <i>Andrew J. S. Hamilton & Robert A. Fesen</i>	779
A NATURAL FORMALISM FOR MICROLENSING <i>Andrew Gould</i>	785
THE ROTATION OF THE LARGE MAGELLANIC CLOUD AND THE IMPLICATIONS FOR MICROLENSING <i>David R. Alves & Cailin A. Nelson</i>	789
STELLAR POPULATIONS IN THE LARGE MAGELLANIC CLOUD FROM 2MASS <i>Sergei Nikolaev & Martin D. Weinberg</i>	804
OPTICAL FLASHES AND RADIO FLARES IN GAMMA-RAY BURST AFTERGLOW: NUMERICAL STUDY <i>Shiho Kobayashi & Re'em Sari</i>	819
MAXIMUM ENTROPY RECONSTRUCTION OF THE INTERSTELLAR MEDIUM. I. THEORY <i>John S. Aradajis & Joel N. Bregman</i>	829
A COMMON GAS-PHASE CHEMISTRY FOR DIFFUSE, TRANSLUCENT, AND DENSE CLOUDS? <i>B. E. Turner</i>	837
KNOTS IN THE OUTER SHELLS OF THE PLANETARY NEBULAE IC 2553 AND NGC 5882 <i>Romano L. M. Corradi, Denise R. Gonçalves, Eva Villaver, Antonio Mampaso, & Mario Perinotto</i>	861
A STUDY OF THE PHYSICS AND CHEMISTRY OF L134N <i>J. E. Dickens, W. M. Irvine, R. L. Snell, E. A. Bergin, F. P. Schloerb, P. Pratap, & M. P. Miralles</i>	870
HYDROGEN ISOTOPIC SUBSTITUTION STUDIES OF THE 2165 WAVENUMBER (4.62 MICRON) "XNC" FEATURE PRODUCED BY ION BOMBARDMENT <i>M. E. Palumbo, Y. J. Pendleton, & G. Strazzulla</i>	890
H, C, N, AND O ISOTOPIC SUBSTITUTION STUDIES OF 2165 WAVENUMBER (4.62 MICRON) "XCN" FEATURE PRODUCED BY ULTRAVIOLET PHOTOLYSIS OF MIXED MOLECULAR ICES <i>M. P. Bernstein, S. A. Sandford, & L. J. Allamandola</i>	894

NORMAL COORDINATE ANALYSIS AND VIBRATIONAL SPECTRA OF AROMATIC CARBON NANOSTRUCTURES <i>S. S. Seahra & W. W. Duley</i>	Page 898
ON THE ABSORPTION OF X-RAYS IN THE INTERSTELLAR MEDIUM <i>J. Wilms, A. Allen, & R. McCray</i>	914
CO OUTFLOWS FROM YOUNG STARS: CONFRONTING THE JET AND WIND MODELS <i>Chin-Fei Lee, Lee G. Mundy, Bo Reipurth, Eve C. Ostriker, & James M. Stone</i>	925
PROPERTIES OF THE PHOTODISSOCIATED GAS IN NGC 6334 <i>Kathleen E. Kraemer, James M. Jackson, Adair P. Lane, & Timothy A. D. Paglione</i>	946
THE IUE AND HUBBLE SPACE TELESCOPE GHRS SPECTRUM OF THE "HYBRID"/PG 1159-TYPE CENTRAL STAR OF THE PLANETARY NEBULA NGC 7094 <i>Walter A. Feibelman</i>	957
THEORETICAL MODELS OF YOUNG OPEN STAR CLUSTERS: EFFECTS OF A GASEOUS COMPONENT AND GAS REMOVAL <i>Fred C. Adams</i>	964
OPTICAL SPECTRUM OF MAIN-, INTER-, AND OFF-PULSE EMISSION FROM THE CRAB PULSAR <i>Alberto Carramiñana, Andrej Čadež, & Tomaž Zwitter</i>	974
TWO K GIANTS WITH SUPERMETEORITIC LITHIUM ABUNDANCES: HDE 233517 AND HD 9746 <i>Suchitra C. Balachandran, Francis C. Fekel, Gregory W. Henry, & Han Uitenbroek</i>	978
RXTE STUDIES OF X-RAY SPECTRAL VARIATIONS WITH ACCRETION RATE IN 4U 1915-05 <i>P. F. Bloser, J. E. Grindlay, D. Barret, & L. Boirin</i>	989
RXTE STUDIES OF LONG-TERM X-RAY SPECTRAL VARIATIONS IN 4U 1820-30 <i>P. F. Bloser, J. E. Grindlay, P. Kaaret, W. Zhang, A. P. Smale, & D. Barret</i>	1000
NEARLY COHERENT OSCILLATIONS IN TYPE I X-RAY BURSTS FROM KS 1731-260 <i>Michael P. Muno, Derek W. Fox, Edward H. Morgan, & Lars Bildsten</i>	1016
THE BROADBAND SPECTRUM OF MXB 1728-34 OBSERVED BY BEPPOSAX <i>T. Di Salvo, R. Iaria, L. Burderi, & N. R. Robba</i>	1034
CARBON AND HYDROGEN IN HOT DB WHITE DWARFS <i>J. L. Provencal, H. L. Shipman, P. Thejll, & Stéphane Vennes</i>	1041
TRANSIENT GAMMA-RAY SPECTROMETER OBSERVATIONS OF GAMMA-RAY LINES FROM NOVAE. II. CONSTRAINING THE GALACTIC NOVA RATE FROM A SURVEY OF THE SOUTHERN SKY DURING 1995-1997 <i>M. J. Harris, B. J. Teegarden, T. L. Cline, N. Gehrels, D. M. Palmer, R. Ramaty, & H. Seifert</i>	1057
TEMPORAL VARIATIONS OF THE WHITE DWARF AND DISK IN OY CARINAE FOLLOWING THE 1992 SUPEROUTBURST <i>F. H. Cheng, Keith Horne, T. R. Marsh, Ivan Hubeny, & E. M. Sion</i>	1064
A NEW LOOK AT THE ECKART-SCUFLAIRE-OSAKI CLASSIFICATION SCHEME OF STELLAR OSCILLATIONS <i>Ilídio Lopes</i>	1071
AN ESTIMATION OF THE SHAPE AND LOCATION OF THE HELIOSHERIC TERMINATION SHOCK <i>G. Exarhos & X. Moussas</i>	1075
HIGH-CADENCE OBSERVATIONS OF AN IMPULSIVE FLARE <i>Haimin Wang, Jiong Qiu, Carsten Denker, Tom Spirock, Hangjun Chen, & Philip R. Goode</i>	1080
SELF-ORGANIZED CRITICALITY FROM SEPARATOR RECONNECTION IN SOLAR FLARES <i>D. W. Longcope & E. J. Noonan</i>	1088
PHYSICAL PARAMETERS OF SOLAR X-RAY JETS <i>Masumi Shimojo & Kazunari Shibata</i>	1100
EXPERIMENTAL AND THEORETICAL RADIATIVE LIFETIMES, BRANCHING FRACTIONS, AND OSCILLATOR STRENGTHS FOR Lu I AND EXPERIMENTAL LIFETIMES FOR Lu II AND Lu III <i>J. A. Fedchak, E. A. Den Hartog, J. E. Lawler, P. Palmeri, P. Quinet, & E. Biémont</i>	1109

	<i>Page</i>
ERRATUM	
THE THREE-DIMENSIONAL EVOLUTION OF RISING, TWISTED MAGNETIC FLUX TUBES IN A GRAVITATIONALLY STRATIFIED MODEL CONVECTION ZONE <i>W. P. Abbett, G. H. Fisher, & Y. Fan</i>	1119
ABSTRACTS OF THE ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES, 2000 NOVEMBER	1120
INDEX TO VOLUMES 540-542, PARTS 1 AND 2	i

